

# M.I.A.S. BULLETIN

A COMMUNICATION FROM THE MONROE INSTITUTE OF APPLIED SCIENCES

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**ORIGINS:** The Institute had its beginning in the Research and Development Division of Monroe Industries, Inc., which at the time (1958) was investigating methods and techniques of accelerated learning through practical environmental changes. As a result of certain findings, the decision was made to broaden the base of such investigations and to alter the purpose of any such research effort. In 1971, the Institute was created to conform with and expand this different approach.

**PREMISE:** Stated simply, the Institute holds to the concept that (1): Consciousness and the focusing thereof contain any and all solutions to the life processes that man desires or encounters. (2): Greater understanding and appreciation of such consciousness can be achieved only through inter-disciplinary approaches and co-ordination; (3): The results of related research effort are meaningful only if reduced to practical application, to "Something of Value" within the context of the contemporary culture or era.

**SUMMARY:** Early studies of consciousness and the decay thereof into sleep brought a major tool into use by the Institute.

It was discovered that phased sine waves at discernable sound frequencies, when blended to create "beat" frequencies within the ranges of electrical brain waves found at the various stages of human sleep, will create a Frequency Following Response (FFR) within the EEG pattern of the individual listening to such audio waveforms. The FFR in turn evokes physiological and mental states in direct relationship to the original stimulus.

With the availability of this new tool, for the first time it became possible to develop and hold the subject into any of the various stages of sleep, from light alpha relaxation through theta into delta and in REM (dreaming). A generic patent on the method and technique was granted to the originator, Robert Monroe, for whom the Institute is named.

The Monroe method and techniques were found to be able to "program" sleep cycles throughout the night of sleep, if so desired. Variations could bring adjustment of the duration of each stage of sleep during the cycle, according to the needs and desires of the individual. The waking-from-sleep moment was enhanced greatly over the traditional alarm clock which had no cognizance of the stage of sleep it was invading. By programming the FFR up into REM sleep for the few minutes before wake-up time, then inserting a beta signal, the sleeper was roused gently yet firmly, without startling shock or dull sleep "hangover".

Another important milestone of Institute research into consciousness came with the development of a "mind awake - body asleep" state.

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The knowing (conviction?) through experience that thinking, cognition, self, personality, and any other components of consciousness are not dependent upon physical sensory signals was in itself a most profound learning process to most participating subjects.

In a social structure bound heavily to causal relationships through matter-time-space, the acceptance of such as valid through personal experience was indeed profound, disturbing, and extremely stimulating to both staff and participants. It was truly a suspected Pandora's Box that offered unexpected potentials in an aspect that had pre-occupied man since his early beginnings.

With the advent of a wide interest in brain-hemispheric theory and study, the Institute undertook to explore the bi-lateral effects of FFR. The natural outcome of this was to seek patterns which would "balance" or adjust the relationships between the left and right brain, and help produce desired changes in behavior. Utilizing the Institute FFR process in the binaural mode, a bi-lateral EEG on a volunteer subject was set up whereby the dominant wave form of each brain hemisphere was displayed on a dual-trace oscilloscope.

Binaural beat-frequency stimulation creates a sustaining FFR that is synchronous in both amplitude and frequency between the brain hemispheres.

The total meaning of such coherency is not understood as no extended studies have been made except those begun by the Institute. Prior to the development of the FFR method, no efficient technique was available to generate an hemi-sync state. It may be true that those in a focused, relaxed state in prayer, meditation, or similar physically-quiet states may produce periods of such synchronization. Certainly, it must occur naturally if only momentarily under certain specific conditions in human life. Exactly what these are is not yet known.

There is a partial entrainment effect, and there are indications that it can be learned much as in the bio-feedback model. Whether the synthesized signal crosses the Corpus Callosum (the nerve network between the brain hemispheres), travels through the brain stem, limbic system - this has yet to be determined. It appears that new neural pathways are establishing as a result.

The efforts of the Institute have not been designed or performed with the intent of offering documentation to the scientific community of the world at large, although much of orthodox scientific method has been utilized. Instead, such can well be the goal of other organizations and individuals who may take the basic findings of the Institute to prove and present them in other forms, in other areas of specialization. The Institute welcomes this participation.

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